

Toxicological Ensembles



Self-Contained Toxic Environment Protective Outfit (STEPO)

Improved Toxicological Agent Protective Ensemble (ITAP)

Mission

Protect personnel working in highly toxic, oxygen-deficient, or unknown environments that are immediately dangerous to life and health.

Description and Specifications

A critical need exists for improving the M3 Toxicological Agents Protective (TAP) suit that has been the military standard for Army Level 1-A protection for 40 years. The **Improved Toxicological Agent Protective (ITAP)** ensemble will provide protection during peacetime and wartime for short-term operations. ITAP will be deployed in “immediately dangerous to life and health” (IDLH) toxic chemical environments (up to one hour), emergency lifesaving response, incident response, routine chemical activity operations, and initial entry monitoring.

The **Self-Contained Toxic Environment Protective Outfit (STEPO)** is a totally encapsulating system that provides protection for personnel working in highly toxic, oxygen-deficient, or unknown environments that are IDLH. STEPO will replace the M3 Toxicological Agents Protective (TAP) ensemble in highly toxic areas (OSHA Level-A environments), while the ITAP ensemble will still be used for routine chemical activity operations in non-IDLH environments. Individuals must be capable of working in toxic environments during peace and wartime conditions.

In environments that exceed IDLH standards, individuals must have an alternate life support system for short-term entry and lifesaving. STEPO is composed of five layers of Nomex and Teflon; the integral hood is made of three layers of Nomex and Teflon. STEPO provides the wearer with clean, closed circuit breathing air rather than the filtered air provided in the TAP ensemble. It provides four hours of percutaneous protection against chemical-biological agents, toxic industrial chemicals, unknown chemicals, rocket fuels, petroleum, oil, and lubricants. It also provides respiratory protection and cooling and is compatible with user radios. The gloves are neoprene/butyl.